

# SEQUENCE LISTING

<110> The University of North Carolina  
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Lee, Daekee

<120> MODULATION OF EPIDERMAL GROWTH FACTOR HETERODIMER ACTIVITY

<130> 421/99 PCT/US

<150> US 60/545,185

<151> 2004-02-17

<150> PCT/US2005/004968

<151> 2005-02-17

<160> 21

<170> PatentIn version 3.3

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Gln Arg Leu Arg Ile Val Arg Gly Thr Gln Leu Phe Glu Asp Lys Tyr  
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Gln Cys Cys His Asp Glu Cys Ala Gly Gly Cys Ser Gly Pro Gln Asp  
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Pro Arg Cys Pro Gln Pro Leu Val Tyr Asn Lys Leu Thr Phe Gln Leu  
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Glu Pro Asn Pro His Thr Lys Tyr Gln Tyr Gly Gly Val Cys Val Ala  
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Ser Trp Pro Pro His Met His Asn Phe Ser Val Phe Ser Asn Leu Thr  
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Glu Leu Gln Asp Cys Leu Gly Gln Thr Leu Val Leu Ile Gly Lys Thr  
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Phe Gln Ala Val Thr Asp His Met Leu Ala Ile Gly Ser Leu Asp His  
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Gly Lys Phe Ala Ile Phe Val Met Leu Asn Tyr Asn Thr Asn Ser Ser	
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His Ala Leu Arg Gln Leu Arg Phe Thr Gln Leu Thr Glu Ile Leu Leu	
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Glu Pro Asn Pro His Ile Lys Tyr Gln Tyr Gly Gly Val Cys Val Ala	
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Gly Lys Val Cys Asp Pro Leu Cys Ser Ser Gly Gly Cys Trp Gly Pro  
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Gly Pro Gly Gln Cys Leu Ser Cys Arg Asn Tyr Ser Arg Glu Gly Val  
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Leu Gln	Glu Tyr	Ser Thr	Lys	Tyr Phe	Tyr Lys	Gln	Asn Gly	Arg	
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atc cgc	ccc att	gtg gca	gag	aat cct	gag tac	ctc	tcg gag	ttc	3834
Ile Arg	Pro Ile	Val Ala	Glu	Asn Pro	Glu Tyr	Leu	Ser Glu	Phe	
1265			1270			1275			
tcg ctg	aag cct	ggc act	atg	ctg ccc	cct ccg	ccc	tac aga	cac	3879
Ser Leu	Lys Pro	Gly Thr	Met	Leu Pro	Pro Pro	Pro	Tyr Arg	His	
1280			1285			1290			
cgg aat	act gtg	gtg tga							3897
Arg Asn	Thr Val	Val							
1295									

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 <211> 1298  
 <212> PRT  
 <213> Mus musculus

<400> 21

Met Ala	Ile Pro	Ser Arg	Arg Lys	Asp Tyr	Pro Lys	Leu Ser	Glu Ile
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Thr Val	Cys Ala	Gly Thr	Glu Asn	Lys Leu	Ser Ser	Leu Ser	Asp Leu
	20		25			30	

Glu Gln	Gln Tyr	Arg Ala	Leu Arg	Lys Tyr	Tyr Glu	Asn Cys	Glu Val
	35		40			45	

Val Met	Gly Asn	Leu Glu	Ile Thr	Ser Ile	Glu His	Asn Arg	Asp Leu
50		55			60		

Ser Phe	Leu Arg	Ser Ile	Arg Glu	Val Thr	Gly Tyr	Val Leu	Val Ala
65		70			75		80

Leu Asn	Gln Phe	Arg Tyr	Leu Pro	Leu Glu	Asn Leu	Arg Ile	Ile Arg
	85			90			95

Gly Thr	Lys Leu	Tyr Glu	Asp Arg	Tyr Ala	Leu Ala	Ile Phe	Leu Asn
	100			105		110	

Tyr Arg	Lys Asp	Gly Asn	Phe Gly	Leu Gln	Glu Leu	Gly Leu	Lys Asn
	115		120			125	

Leu Thr Glu Ile Leu Asn Gly Gly Val Tyr Val Asp Gln Asn Lys Phe  
 130 135 140

Leu Cys Tyr Ala Asp Thr Ile His Trp Gln Asp Ile Val Arg Asn Pro  
 145 150 155 160

Trp Pro Ser Asn Met Thr Leu Val Ser Thr Asn Gly Ser Ser Gly Cys  
 165 170 175

Gly Arg Cys His Lys Ser Cys Thr Gly Arg Cys Trp Gly Pro Thr Glu  
 180 185 190

Asn His Cys Gln Thr Leu Thr Arg Thr Val Cys Ala Glu Gln Cys Asp  
 195 200 205

Gly Arg Cys Tyr Gly Pro Tyr Val Ser Asp Cys Cys His Arg Glu Cys  
 210 215 220

Ala Gly Gly Cys Ser Gly Pro Lys Asp Thr Asp Cys Phe Ala Cys Met  
 225 230 235 240

Asn Phe Asn Asp Ser Gly Ala Cys Val Thr Gln Cys Pro Gln Thr Phe  
 245 250 255

Val Tyr Asn Pro Thr Thr Phe Gln Leu Glu His Asn Phe Asn Ala Lys  
 260 265 270

Tyr Thr Tyr Gly Ala Phe Cys Val Lys Lys Cys Pro His Asn Phe Val  
 275 280 285

Val Asp Ser Ser Ser Cys Val Arg Ala Cys Pro Ser Ser Lys Met Glu  
 290 295 300

Val Glu Glu Asn Gly Ile Lys Met Cys Lys Pro Cys Thr Asp Ile Cys  
 305 310 315 320

Pro Lys Ala Cys Asp Gly Ile Gly Thr Gly Ser Leu Met Ser Ala Gln  
 325 330 335

Thr Val Asp Ser Ser Asn Ile Asp Lys Phe Ile Asn Cys Thr Lys Ile  
 340 345 350

Asn Gly Asn Leu Ile Phe Leu Val Thr Gly Ile His Gly Asp Pro Tyr  
 355 360 365



Asn Ala Ile Asp Ala Ile Asp Pro Glu Lys Leu Asn Val Phe Arg Thr  
 370 375 380

Val Arg Glu Ile Thr Gly Phe Leu Asn Ile Gln Ser Trp Pro Pro Asn  
 385 390 395 400

Met Thr Asp Phe Ser Val Phe Ser Asn Leu Val Thr Ile Gly Gly Arg  
 405 410 415

Val Leu Tyr Ser Gly Leu Ser Leu Leu Ile Leu Lys Gln Gln Gly Ile  
 420 425 430

Thr Ser Leu Gln Phe Gln Ser Leu Lys Glu Ile Ser Ala Gly Asn Ile  
 435 440 445

Tyr Ile Thr Asp Asn Ser Asn Leu Cys Tyr Tyr His Thr Ile Asn Trp  
 450 455 460

Thr Thr Leu Phe Ser Thr Ile Asn Gln Arg Ile Val Ile Arg Asp Asn  
 465 470 475 480

Arg Arg Ala Glu Asn Cys Thr Ala Glu Gly Met Val Cys Asn His Leu  
 485 490 495

Cys Ser Asn Asp Gly Cys Trp Gly Pro Gly Pro Asp Gln Cys Leu Ser  
 500 505 510

Cys Arg Arg Phe Ser Arg Gly Lys Ile Cys Ile Glu Ser Cys Asn Leu  
 515 520 525

Tyr Asp Gly Glu Phe Arg Glu Phe Glu Asn Gly Ser Ile Cys Val Glu  
 530 535 540

Cys Asp Ser Gln Cys Glu Lys Met Glu Asp Gly Leu Leu Thr Cys His  
 545 550 555 560

Gly Pro Gly Pro Asp Asn Cys Thr Lys Cys Ser His Phe Lys Asp Gly  
 565 570 575

Pro Asn Cys Val Glu Lys Cys Pro Asp Gly Leu Gln Gly Ala Asn Ser  
 580 585 590

Phe Ile Phe Lys Tyr Ala Asp Gln Asp Arg Glu Cys His Pro Cys His  
 595 600 605

Pro Asn Cys Thr Gln Gly Cys Asn Gly Pro Thr Ser His Asp Cys Ile  
 610 615 620

Tyr Tyr Pro Trp Thr Gly His Ser Thr Leu Pro Gln His Ala Arg Thr  
 625 630 635 640

Pro Leu Ile Ala Ala Gly Val Ile Gly Gly Leu Phe Ile Leu Val Ile  
 645 650 655

Met Ala Leu Thr Phe Ala Val Tyr Val Arg Arg Lys Ser Ile Lys Lys  
 660 665 670

Lys Arg Ala Leu Arg Arg Phe Leu Glu Thr Glu Leu Val Glu Pro Leu  
 675 680 685

Thr Pro Ser Gly Thr Ala Pro Asn Gln Ala Gln Leu Arg Ile Leu Lys  
 690 695 700

Glu Thr Glu Leu Lys Arg Val Lys Val Leu Gly Ser Gly Ala Phe Gly  
 705 710 715 720

Thr Val Tyr Lys Gly Ile Trp Val Pro Glu Gly Glu Thr Val Lys Ile  
 725 730 735

Pro Val Ala Ile Lys Ile Leu Asn Glu Thr Thr Gly Pro Lys Ala Asn  
 740 745 750

Val Glu Phe Met Asp Glu Ala Leu Ile Met Ala Ser Met Asp His Pro  
 755 760 765

His Leu Val Arg Leu Leu Gly Val Cys Leu Ser Pro Thr Ile Gln Leu  
 770 775 780

Val Thr Gln Leu Met Pro His Gly Cys Leu Leu Asp Tyr Val His Glu  
 785 790 795 800

His Lys Asp Asn Ile Gly Ser Gln Leu Leu Leu Asn Trp Cys Val Gln  
 805 810 815

Ile Ala Lys Gly Met Met Tyr Leu Glu Glu Arg Arg Leu Val His Arg  
 820 825 830

Asp Leu Ala Ala Arg Asn Val Leu Val Lys Ser Pro Asn His Val Lys  
 835 840 845

Ile Thr Asp Phe Gly Leu Ala Arg Leu Leu Glu Gly Asp Glu Lys Glu  
850 855 860

Tyr Asn Ala Asp Gly Gly Lys Met Pro Ile Lys Trp Met Ala Leu Glu  
865 870 875 880

Cys Ile His Tyr Arg Lys Phe Thr His Gln Ser Asp Val Trp Ser Tyr  
885 890 895

Gly Val Thr Ile Trp Glu Leu Met Thr Phe Gly Gly Lys Pro Tyr Asp  
900 905 910

Gly Ile Pro Thr Arg Glu Ile Pro Asp Leu Leu Glu Lys Gly Glu Arg  
915 920 925

Leu Pro Gln Pro Pro Ile Cys Thr Ile Asp Val Tyr Met Val Met Val  
930 935 940

Lys Cys Trp Met Ile Asp Ala Asp Ser Arg Pro Lys Phe Lys Glu Leu  
945 950 955 960

Ala Ala Glu Phe Ser Arg Met Ala Arg Asp Pro Gln Arg Tyr Leu Val  
965 970 975

Ile Gln Gly Asp Asp Arg Met Lys Leu Pro Ser Pro Asn Asp Ser Lys  
980 985 990

Phe Phe Gln Asn Leu Leu Asp Glu Glu Asp Leu Glu Asp Met Met Asp  
995 1000 1005

Ala Glu Glu Tyr Leu Val Pro Gln Ala Phe Asn Ile Pro Pro Pro  
1010 1015 1020

Ile Tyr Thr Ser Arg Thr Arg Ile Asp Ser Asn Arg Ser Glu Ile  
1025 1030 1035

Gly His Ser Pro Pro Pro Ala Tyr Thr Pro Met Ser Gly Asn Gln  
1040 1045 1050

Phe Val Tyr Gln Asp Gly Gly Phe Ala Thr Gln Gln Gly Met Pro  
1055 1060 1065

Met Pro Tyr Arg Ala Thr Thr Ser Thr Ile Pro Glu Ala Pro Val  
1070 1075 1080

Ala	Gln	Gly	Ala	Thr	Ala	Glu	Met	Phe	Asp	Asp	Ser	Cys	Cys	Asn
1085						1090					1095			
Gly	Thr	Leu	Arg	Lys	Pro	Val	Ala	Pro	His	Val	Gln	Glu	Asp	Ser
1100						1105					1110			
Ser	Thr	Gln	Arg	Tyr	Ser	Ala	Asp	Pro	Thr	Val	Phe	Ala	Pro	Glu
1115						1120					1125			
Arg	Asn	Pro	Arg	Gly	Glu	Leu	Asp	Glu	Glu	Gly	Tyr	Met	Thr	Pro
1130						1135					1140			
Met	His	Asp	Lys	Pro	Lys	Gln	Glu	Tyr	Leu	Asn	Pro	Val	Glu	Glu
1145						1150					1155			
Asn	Pro	Phe	Val	Ser	Arg	Arg	Lys	Asn	Gly	Asp	Leu	Gln	Ala	Leu
1160						1165					1170			
Asp	Asn	Pro	Glu	Tyr	His	Ser	Ala	Ser	Ser	Gly	Pro	Pro	Lys	Ala
1175						1180					1185			
Glu	Asp	Glu	Tyr	Val	Asn	Glu	Pro	Leu	Tyr	Leu	Asn	Thr	Phe	Ala
1190						1195					1200			
Asn	Ala	Leu	Gly	Ser	Ala	Glu	Tyr	Met	Lys	Asn	Ser	Val	Leu	Ser
1205						1210					1215			
Val	Pro	Glu	Lys	Ala	Lys	Lys	Ala	Phe	Asp	Asn	Pro	Asp	Tyr	Trp
1220						1225					1230			
Asn	His	Ser	Leu	Pro	Pro	Arg	Ser	Thr	Leu	Gln	His	Pro	Asp	Tyr
1235						1240					1245			
Leu	Gln	Glu	Tyr	Ser	Thr	Lys	Tyr	Phe	Tyr	Lys	Gln	Asn	Gly	Arg
1250						1255					1260			
Ile	Arg	Pro	Ile	Val	Ala	Glu	Asn	Pro	Glu	Tyr	Leu	Ser	Glu	Phe
1265						1270					1275			
Ser	Leu	Lys	Pro	Gly	Thr	Met	Leu	Pro	Pro	Pro	Pro	Tyr	Arg	His
1280						1285					1290			
Arg	Asn	Thr	Val	Val										
1295														